

REMARKS

As a preliminary matter, it does not appear that the Petition and Amendment for Correction of Inventorship filed on November 4, 2005 has been entered (copy enclosed). Accordingly, entry of the Petition and Amendment for Correction of Inventorship, and written confirmation of such entry, is once again respectfully requested.

Claims 11-16 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 6,108,064 to Minoura et al. in view of United States Patent No. 6,141,075 to Ohmuro et al.¹ and United States Patent No. 6,781,759 to Wakita et al. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited references fail to disclose or suggest all of the features defined in independent Claims 11, 12 and 13. More specifically, Applicants respectfully submit that the cited references fail to disclose or suggest a liquid crystal device with the claimed correlations between the ratio R_f/R_{lc} (i.e., (retardation of the retardation plate)/(retardation of the liquid crystal layer)) and the average tilt angle of the projections and depressions. Independent Claims 11, 12 and 13 of the present application each define a specific correlation between the ratio R_f/R_{lc} and the average tilt angle of the projections and depressions. More specifically, Claim 11 recites that the ratio R_f/R_{lc} is not less than 0.6 nor greater than 0.9 and that the average tilt angle of the projections and depressions is not less than 4° nor greater than 6°; Claim 12 recites that the ratio R_f/R_{lc} is not less than 0.5 nor greater than 0.8 and that the average tilt angle of the projections and

¹ In the Office Action, the Examiner incorrectly refers to this reference as Ohmun et al., instead of Ohmuro et al.

depressions is not less than 7° nor greater than 9° ; and Claim 13 recites that the ratio R_f/R_{lc} is not less than 0.4 nor greater than 0.7 and that the average tilt angle of the projections and depressions is not less than 10° nor greater than 15° .

Thus, as indicated in independent Claims 11, 12 and 13, the present inventors have found that for each of three different specific ranges of the average tilt angle of the projections and depressions, a specific range of values for the ratio R_f/R_{lc} should be used. Part of the rationale used in determining the claimed sets of ranges of these two parameters was explained in Response B, pages 3-4.

In contrast, none of the cited references, alone or in combination, disclose or suggest the claimed relationships between the ratio R_f/R_{lc} and the different ranges of average tilt angles. On page 3 (lines 3-4) of the Office Action, the Examiner correctly acknowledges that the Minoura et al. reference does not disclose this feature. Accordingly, the Examiner relies on the Ohmuro et al. reference for this feature, by referring to column 11, rows 30-35 and column 29, rows 45-50 of Ohmuro et al. Initially, Applicants respectfully submit that it appears that the Examiner intended to refer to column 28 (not 29) of Ohmura et al.

Applicants would like to point out that in column 28 (lines 45-50) of Ohmuro et al., the 100 nm value for retardation is in the in-plane direction, and not in the perpendicular direction (thickness direction), as defined in Claims 11-13. Thus, the Examiner's analysis and example of using 100nm for the R_f value and 111 for the R_{lc} value are based on an incorrect interpretation of the Ohmuro et al. reference.

Further, Applicants respectfully submit that the Ohmuro et al. reference does not disclose or suggest that there should be any correlation between the value of the ratio R_f/R_{lc} and the value of the average tilt angle of the projections and depressions, such as defined in independent Claims 11-13. In fact, the Ohmuro et al. reference does not even appear to disclose the use of projections or depressions. Accordingly, it follows that this reference cannot be used to support an assertion that there should be some correlation between an average tilt angle of such non-disclosed projections/depressions and the value of the ratio R_f/R_{lc} , much less the specific correlations defined in independent Claims 11-13.

Additionally, although the Wakita et al. reference does disclose the use of projections and depressions, there is only a brief mention of retardation films (col. 13, line 2), and there is no disclosure or suggestion of specific retardation values for a retardation plate and the liquid crystal. Further, there is no mention of the ratio R_f/R_{lc} , nor are there any suggested values for this ratio. Accordingly, it follows that the Wakita et al. reference cannot be relied upon to support an assertion that there should be some correlation between an average tilt angle of the projections/depressions and the non-disclosed value of the non-disclosed ratio R_f/R_{lc} . Nor can this reference be relied upon for the more specific assertion of the specific correlations defined in independent Claims 11-13.

Finally, Applicants also respectfully submit that the Minoura et al. reference appears to suggest that the ratio R_f/R_{lc} should equal one (1), which is different from the claimed ranges of 0.6 to 0.9 (Claim 11), 0.5 to 0.8 (Claim 12) and 0.4 to 0.7 (Claim 13), in addition to lacking the required correlation between the value of the ratio and average tilt

angle of projections/depressions (as discussed above). More specifically, in several portions of the Minoura et al. reference, this reference teaches that the total retardation value of the retardation film(s) and the retardation value of the liquid crystal should be equal, which would make the ratio R_f/R_{lc} equal to one (1). *See e.g.*, Minoura et al., col. 12, lines 28-30 (“the total retardation of the retardation film(s) is generally equal to the retardation of the liquid crystal panel”); col. 20, lines 19-21 (“total retardation of the foregoing additional retardation film and the retardation film (33B)₂ is set generally equal to the retardation of the liquid crystal panel 31”). Accordingly, the Minoura et al. reference does not even disclose the claimed values for the ratio R_f/R_{lc} , but instead teaches away from such values by teaching that the value of the ratio R_f/R_{lc} should be equal to 1.

For all of the reasons set forth above, Applicants respectfully request the withdrawal of this §103 rejection of independent Claims 11-13 and associated dependent Claims 14-16.

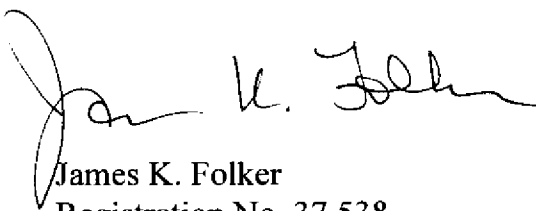
Finally, Applicants have also added new Claims 31-34. Applicants respectfully submit that new Claims 31-34 are also allowable over the references of record.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

If a Petition under 37 C.F.R. §1.136(a) for an extension of time for response is required to make the attached response timely, it is hereby petitioned under 37 C.F.R. §1.136(a) for an extension of time for response in the above-identified application for the period required to make the attached response timely. The Commissioner is hereby authorized to charge fees which may be required to this application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069.

Respectfully submitted,

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By 
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May 14, 2009

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In re Patent of

Kunihito Tashiro et al.

PATENT APPLICATION

JKF:has

Serial No. 10/714,816 - Filed: November 17, 2003

1117,68737

LIQUID CRYSTAL DISPLAY DEVICE

November 4, 2005

Enclosed is a Transmittal (in duplicate); Election and Amendment A; Petition and Amendment for Correction of Inventorship Under 37 C.F.R. § 1.48(b) with check for \$130.00; and Certificate of First Class Mailing.

Commissioner for Patents

Please acknowledge receipt of the above-identified documents by applying the Patent and Trademark Office receipt hereto and mailing this card.

Respectfully,

GREER, BURNS & CRAIN, LTD.



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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kunihiro Tashiro et al.
Serial No.: 10/714,816
Conf. No.: 2176
Filed: 11/17/2003
For: LIQUID CRYSTAL DISPLAY
DEVICE
Art Unit: 2871
Examiner: Parker, Kenneth

I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date.

November 4, 2005

Date

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F-CLASS.WCM

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PETITION AND
AMENDMENT FOR CORRECTION OF INVENTORSHIP
UNDER 37 C.F.R. §1.48(b)

The above-named Application was subject to a Restriction Requirement, and in response to the Restriction Requirement, Claims 11-16 were elected and 1-15 and 17-30 were cancelled, without prejudice. With the cancellation of Claims 1-15 and 17-30, a change in inventorship is necessary.

One of the joint inventors, Hidefumi Yoshida, did not contribute to the subject matter of now pending Claims 11-16. Accordingly, Applicants hereby petition that the name Hidefumi Yoshida, be deleted a joint inventor as this inventor's contributions are no longer

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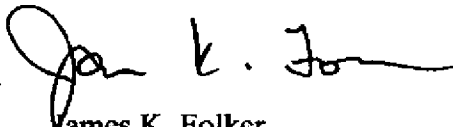
being claimed in the above-named Application. Therefore, the joint inventors in the present Application are Kunihiro Tashiro, Katsufumi Ohmuro and Norio Sugiura.

In fulfillment of the requirements of 37 C.F.R. §1.48 (b), a check for \$130.00, the petition fee set forth in 37 C.F.R. §1.17(i), is also enclosed herein.

Applicants respectfully request entry of this Petition and Amendment for Correction of Inventorship because the proper procedures required under 37 C.F.R. §1.48(b) are believed to have been followed.

Respectfully submitted,

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